

RYAZHNSKAYA, T.K.

(1) 18(6)

PHASE I BOOK EXPLOITATION

SOV/3217

Baykov, Dmitriy Ivanovich, Yuliy Semenovitch Zolotorevskiy, Vladimir Leonidovich Russo, and Tamara Konstantinovna Ryazhskaya

Svarivayushchiyesya alyuminiyevyye splavy; svoystva i primeneniye  
(Weldable Aluminum Alloys; Properties and Application) Leningrad,  
Sudpromgiz, 1959. 234 p. 4,300 copies printed.

Ed.: Yu. S. Kazarov; Tech. Ed.: L. I. Levochkina.

PURPOSE: This book is intended for production engineers and designers working with corrosion-resistant weldable aluminum alloys.

COVERAGE: The authors describe properties of corrosion-resistant weldable aluminum-magnesium alloys, their production, machining, welding and riveting. They give data on corrosion resistance and on the effect of the rate of loading, temperature, and notching on the properties of the alloys. The authors discuss special cases and some characteristic features of designing aluminum alloy constructions, giving examples of the application of aluminum alloys in shipbuilding and railroad rolling stock. The following personalities are mentioned as having contributed to the compilation of this book:

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SOV/3217

# Weldable Aluminum Alloys

V. G. Azbukin, Yu. A. Belyakov, K. S. Bolotova, V. G. Danchenko, Z. I. Ivanova, I. V. Korchazhinskaya, I. A. Nezhnikovskiy, A. I. Pas', A. N. Polubotko, I. P. Prosyankin, V. S. Rudometov, Yu. S. Ryabushkin, Z. G. Sokolova, Ye. I. Tarakan-chikova, and M. M. Chikhanova. The authors also express their thanks to K. S. Bolotova, P. N. Yefimov, Ye. I. Tarakanchikova, I. A. Travnikova and M. M. Chikhanova for their help in processing the material. There are 65 references, 42 Soviet, 10 English, 10 German, and 3 French.

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AVAILABLE: Library of Congress

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| 1ST AND 2ND ORDERS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |  | 3RD AND 4TH ORDERS |  |  |  |  |  |  |  |  |  |
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| PROCESSES AND PROPERTIES INDEX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |  |  |  |
| <p><i>M</i></p> <p><b>Properties of Silicon Brasses and Bronzes Made by Using Ferro-Silicon.</b><br/> T. K. Ryazhskaya (<i>Sudmetstvenie</i>, 1968, (2), 15-19).—[In Russian.] A study was made of the effects of silicon (using ferro-silicon temper alloys) on the mechanical and casting properties of (a) brasses containing silicon 1.5-4.5, copper 70-81, iron 0-6, lead 1-0, tin 0-3, aluminium 0-1, manganese 0-5, antimony 0-1%, and zinc the remainder, and (b) bronzes containing silicon 2.75-3.5, manganese 1-1.5, iron 0-3, lead 0-0.3, tin 0-25, nickel 0-1%, and copper the remainder. It was found that the mechanical properties of these alloys are mainly affected by their silicon content and that iron introduced by the temper alloy slightly reduces the ductility. Linear shrinkage of the alloys is reduced by increasing their silicon content, while their fluidity is increased.<br/> —V. K.</p> <p><i>2</i></p> |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |  |  |  |
| <p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |  |  |  |

VLASOV, Vladimir Yefimovich, zhurnalist; RYAZHSKIY, O., red.; YEGOROVA, I.,  
tekhn. red.

[Blue glow] Goluboi ogon'. Moskva, Izd-vo TsK VLKSM "Molodaia  
gvardiia," 1961. 30 p. (MIRA 14:11)  
(Electric welding)

IVANOV, Kim Mikhaylovich; RYAZHSKIY, O., red.; GOLUBKOVA, G., tekhn.  
red.

[Seven-year plan in five years] Sem' - v piat'. Moskva, Izd-  
vo TsKVLKSM "Molodaia gvardiia," 1960. 53 p. (MIRA 15:4)

1. Sekretar' Leningradskogo gorodskogo komiteta Vsesoyuznogo  
Leninskogo Kommunisticheskogo soyuza molodezhi (for Ivanov).  
(Leningrad—Socialist competition)

L 13367-66 FBD/EWT(1)/EWT(m)/EBC(k)-2/EWA(d)/EWP(v)/T/EWP(t)/EWA(b)-2/EWP(k)/EWP(b)/

ACC NR: AP6001806

SOURCE CODE: UR/0107/65/000/012/0003/0005  
WG/JD/HM

AUTHOR: Vasil'yev, A.; Ryasik, V.

ORG: none

TITLE: Working profession of lasers <sup>25/44</sup>

SOURCE: Radio, no. 12, 1965, 3-5

TOPIC TAGS: medical laser, welding equipment/Razdan ruby laser, laser, ruby laser, SU-1 ruby laser, GOR 100 laser, Luch 3 solid state laser, solid state laser, laser application, semiconductor laser

ABSTRACT: Several types of lasers are produced in quantity in the Soviet Union. Some of their salient features are reviewed in this article. The lot-produced Razdan ruby laser (Fig. 1) is a portable unit. It uses a ruby crystal 80 mm long and 6.5 mm in diameter as the active element and the 500-j IFP-800 xenon lamp for pumping. Its resonator consists of two parallel mirrors, one of which has a reflection coefficient of 50%. The Razdan, with its own closed-loop cooling system, has the following characteristics: pulse repetition rate, 2 cps; pulse duration, 400 mu-sec; output energy, 2 j; emission wavelength, 6943 Å; power supply, 220 v, a-c, 50 cps; power consumption, 3 kw. The unit weighs 32 kg and measures 350 x 290 x 450 mm. It can be used for laboratory research and in industry for spot welding and punching of small holes. For purely research purposes, such as studies into the interaction of high-intensity emissions with various materials, a laser with a controlled Q (Fig. 2) has been developed. It produces 30-mm pulses with a duration of 40-50

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88  
80  
B



L 13367-66

ACC NR: AP6001806

3  
nanosec. The SU-1 (Fig. 3) is a ruby laser unit designed exclusively for welding refractory metals such as titanium and steel and gold and silicon. It generates light pulses with a duration of 5 msec and an energy of 1 j. These powerful pulses also make it possible to weld metals with greatly differing melting temperatures, such as aluminum with nickel. Ruby lasers have also been developed for medical applications. An ophthalmo-coagulator (Fig. 4), which employs a laser, is designed for bonding exfoliated eye retinas. The laser emits pulses with energies of up to 0.5 j. The system is optically controlled, and the light beam can be focused on any point of the eye. The field of application of neodymium-doped glass lasers is also growing. These lasers emit at a wavelength of 1.06  $\mu$ . The GOR-100 system (Fig. 5) belongs to this group. The energy of pulsed emission for the GOR-100 reaches 100 j. The divergence of the light beam takes several minutes, and as a result a high energy density can be obtained on the irradiated surface. The GOR-100 uses a neodymium-doped glass element 240 mm long and 16 mm in diameter. A modification of the GOR-100 laser is the GSI-1 system, which has similar parameters but whose active element is in the form of a rectangular plate. This arrangement produces an output beam with a rectangular cross section. Such lasers are used for welding, cutting, and drilling of metals. Another group of lasers uses semiconductors as active elements, such as gallium arsenide. Fig. 6 illustrates the Luch-3 laser system with a gallium arsenide diode  $0.4 \times 0.4 \times 0.1$  mm as the active element. It weighs 1.5 kg and measures  $90 \times 155 \times 180$  mm. The cooling system is in the form of a Dewar vessel filled with liquid nitrogen, assuring a one-hour continuous operation. It has the following basic characteristics: emission wavelength, 8430  $\text{\AA}$ ; pulse duration, 2  $\mu$ -sec; pulse repetition rate, 70-200 cps; power supply, 27 v, d-c.  
Card 2/4

L 13367-66

ACC NR: AP8001806

This laser is primarily designed for laboratory purposes. Orig. art. has: 6 figures. 2  
[ATD PRESS: 4165-F]

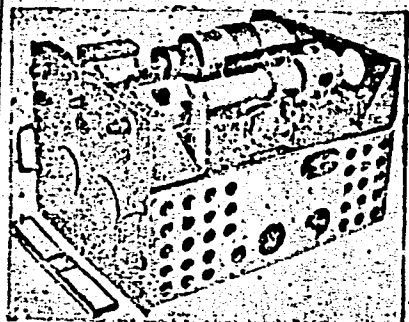


Fig. 1. Razdan ruby laser

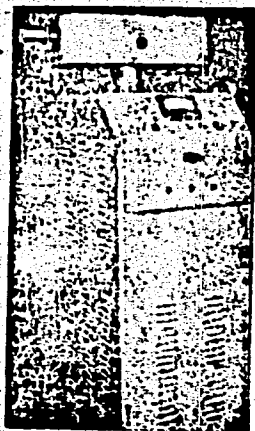


Fig. 2. Ruby laser with controlled Q



Fig. 3. SU-1 laser welding unit

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L 13367-66

ACC NR: AP6001806

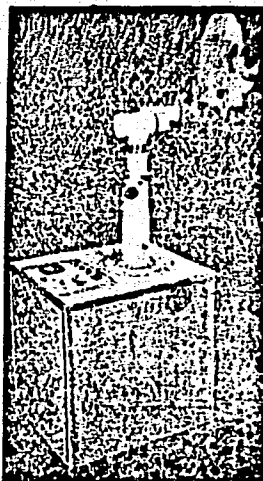


Fig. 4. Laser ophthalmocoagulator

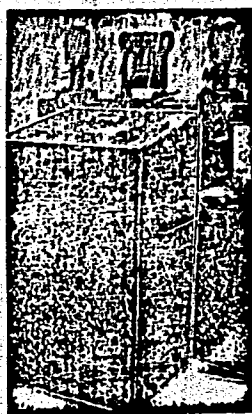


Fig. 5. GOR-100 neodymium-doped glass laser

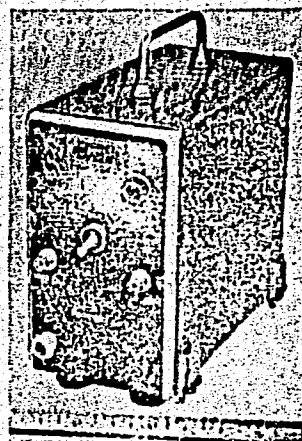


Fig. 6. Luch-3 gallium arsenide solid-state laser

SUB CODE: 20, 13, 06 / SUBM DATE: none

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Joining of dissimilar metals

| 1ST AND 2ND ORDERS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 3RD AND 4TH ORDERS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| PROCESSES AND PROPERTIES INDEX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p>SA <u>RYAZIN, P. A.</u> B 66 f</p> <p>1022. Calculation of Radiation at Short Distances from a Rectilinear Aerial. P. Ryzin, <i>Techn. Phys., U.S.S.R.</i> 4, 10, pp. 800-804, 1937. In French.—Calculations are given of the electromagnetic field set up in a homogeneous non-conducting medium by a rectilinear aerial having a harmonic current distribution. The equations applicable to the case in question are obtained by integration of the elementary fields due to Hertzian dipoles and are valid both at a considerable distance from and close to the aerial. The case of the half-wave aerial and its harmonics is examined in greater detail, particular attention being paid to the phase relations of the electromagnetic field. A. W.</p> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p>ASD SLA METALLURGICAL LITERATURE CLASSIFICATION</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Ryazin, P. A. Propagation of radio waves near the earth's surface. Akad. Nauk SSSR. Trudy Fiz. Inst. 3, no. 2, 45-20 (1946). (Russian. English summary)

The central problem is the investigation of the phase structure and velocity of the field of radio waves emitted by a vertical antenna located on the plane surface of the earth. The important point is the knowledge of the vertical component of the electric vector on the surface at distances which are not too close to the dipole. It is sufficient to consider the vertical component of the Hertzian vector  $\Pi$  on the outer side of the surface. The retarded phase of  $\Pi$  and the retarded phase of the vertical component of the electric vector, which is identical with the former phase in the wave zone, may be written as  $\omega r/c + \varphi(r/\lambda, 0, 2\sigma/f, \epsilon)$ , where  $c$  is the phase velocity of propagation in the air. The additional phase which is due to the effect of the earth increases the main linear increment of the retarded phase.

For prescribed properties of the earth the additional phase in the wave zone grows monotonically from a minimal positive value and for  $r/\lambda \rightarrow \infty$  approaches a constant limit which lies between  $\pi/2$  and  $\pi$ . The phase velocity of waves over the surface at sufficient distances from the proximal zone is smaller than the velocity of light in vacuum and

approaches the latter asymptotically as the distance from the emitter is increased. At sufficiently large distances from the antenna the phase velocity of the earth wave is constant, equals the velocity in the atmosphere and is thus independent of the properties of the ground. The distribution of the additional phase is investigated in detail; this phase determines the distortion of the equiphase surfaces throughout the complete space over the earth and for various conditions of propagation. At a given distance from the antenna that part of the retarded phase which must be added to the main linear value has a maximal value on the surface of the earth and decreases monotonically as the height of the point of observation is increased, approaching values close to zero.

As the front of the wave moves away from the antenna its lower part, which has a velocity below that of light, lags behind the upper part and thus becomes distorted, losing its ideal spherical nature near the surface. The velocity of the front as a whole asymptotically approaches that of light; as a result beginning at certain distances the wave propagates at high altitudes with its original shape while near the earth it conserves its distorted form.

*From the author's summary.*

Source: Mathematical Reviews.

Vol 10, No. 9

*BF*

RYAZIN, P. A.

PA 11T33

USSR/Radio Waves - Reflection  
Fields, Electromagnetic

Mar 1946

"The Field of Radio Waves Between Two Semiconducting  
Media," P. A. Ryazin, L. M. Brekhovskikh, 10 pp

"Izv Ak Nauk Ser Fiz" Vol X, No 3

Complete mathematical treatment of the problem of  
transmission and reflection of waves between two  
media: Differential equations set up; solution  
in series form; graphs of various solutions; expres-  
sions for various coefficients of reflection, trans-  
mission, etc.; diagrams.

11T33

69160

21.2/00

8/139/59/000/06/017/034

E032/B114

**AUTHORS:** Ryazin, P.A., and Minervin, A.B.

**TITLE:** On the Capture of Electrons into the Acceleration Process  
in Betatrons and Synchrotrons

**PERIODICAL:** Izvestiya vysshikh uchebnykh zavedeniy, Fizika,  
1959, Nr 6, pp 112-123 (USSR)

**ABSTRACT:** This paper was presented at the Inter-Collegiate Conference on Accelerators (Tomsk, February, 1958). Self-consistent solution of the many-electron problem is sought subject to boundary and initial conditions. The intensity of the axially symmetric magnetic field during the time of admission and the injection voltage are taken as the initial conditions, and collisions of electrons with the rear wall of the injector, and with the walls of the chamber, as the boundary conditions. Among the factors which influence the capture process, the theory considers adiabatic contraction of electronic orbits due to the growth of the magnetic field, the effect of self-induction of the non-steady current in the chamber, and the effect of the Coulomb interaction between electrons which leads both to a reduction in the amplitude of betatron oscillations and to the displacement of

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1/3

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S/139/59/000/06/017/034

E032/E114

On the Capture of Electrons into the Acceleration Process in  
Betatrons and Synchrotrons

instantaneous orbits. The expressions obtained may be used to calculate current pulses in the chamber, and betatron characteristics under different working conditions. The theory gives both qualitative and quantitative explanation of processes which take place during the capture both on the leading and the trailing edges of the injection pulse, as well as on its flat part. The equations of motion are solved taking into account all the above effects. The capture mechanism is dependent on the Coulomb interaction and the collective interaction. The latter effect is described by three terms, the first of which describes the reduction in the amplitude of betatron oscillations during the decrease in the total non-stationary current in the chamber; the second describes the contraction of the orbits due to the latter decrease which is the result of a weakening in the radial repulsive forces in the space charge; and, finally, the third term describes the effect of self-induction in the beam during the capture process.

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69160  
S/139/59/000/06/017/034  
E032/E114

On the Capture of Electrons into the Acceleration Process in  
Betatrons and Synchrotrons

Acknowledgements are made to S.N. Stolyarov and  
A.V. Uspenskiy, and to B.M. Drozdov's section of the  
Computing Centre of the Academy of Sciences, USSR.  
There are 6 figures.

ASSOCIATION: Fizicheskiy institut imeni P.N. Lebedeva AN SSSR  
(Institute of Physics imeni P.N. Lebedev, Academy  
of Sciences, USSR)

SUBMITTED: December 27, 1958

Card 3/3

21(9)

AUTHORS:

Ryazin, P. A., Minervin, A. B.

SOV/89-6-1-10/33

TITLE:

~~Investigation of the Capture of Electrons Under the Conditions of Acceleration in Betatrons and Synchrotrons~~  
(K issledovaniyu zakhvata elektronov v rezhim uskoreniya v betatronakh i sinkhrotronakh)

PERIODICAL:

Atomnaya energiya, 1959, Vol 6, Nr 1, pp 68 - 69 (USSR)

ABSTRACT:

The problem of electron capture during acceleration is theoretically investigated, and a non-contradictory solution of the many-electron problem is derived in consideration of the boundary and initial conditions. By means of the derived formulae it is possible to determine the coordinates of the electrons and fluxes in the vacuum chamber of the accelerator. By means of the iteration method it is further possible to calculate the non-steady fluxes in the chamber and to give all other fundamental parameters of the accelerator. If  $J = 0$  (electron flux in the chamber) the equation of the single-electron theory is obtained, which is applicable also in the case of low emission currents. In the case of high emission currents the mechanism of collective interaction is the decisive factor. Capture

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The Investigation of the Capture of Electrons Under  
the Conditions of Acceleration in Betatrons and  
Synchrotrons

SOV/89-6-1-10/33

takes place both on the front and on the rear of the impulse.  
Between these two there is a difference which still remains  
to be explained.

If an internal electron feed is used, capture on the front  
is equal to capture on the rear part of the impulse in the  
case of external feed. This relation is reciprocal.

A more detailed description of the theory of accurate and  
approximated solution methods for the characteristic  
properties of a betatron is in preparation.

SUBMITTED: February 10, 1958

Card 2/2



RYAZIN, F. A.

PHASE I BOOK EXPLOITATION

SOV/5134

Moscow. Inzhenerno-fizicheskiy institut

Uskoriteli; sbornik statey (Accelerators; Collection of Articles)  
Moscow, Atomizdat, 1960. 163 p. Errata slip inserted. 3,600  
copies printed.

Sponsoring Agency: Ministerstvo vysshego i srednego spetsial'nogo  
obrazovaniya RSFSR.

Ed. (Title page): G. A. Tyagunov, Doctor of Technical Sciences,  
Professor; Tech. Ed.: S. M. Popova.

PURPOSE: This collection of articles is intended for persons design-  
ing and constructing accelerators, and for technical personnel  
specializing in the field of superhigh frequencies.

COVERAGE: The book contains articles by staff members of the De-  
partment of Electrophysical Installations of the MIFI (Moscow Engi-  
neering Physics Institute) reflecting theoretical and experimental  
investigations of linear electron accelerators, betatrons and

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Accelerators (Cont.)

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synchrotrons; one article deals with ion sources for cyclotrons. The theoretical papers on linear electron accelerators are a continuation of a similar research paper published in the collection of articles "Lineynyye uskoriteli" (MIFI edition, 1959) on the dynamics of particles in these machines. The theoretical papers on particle trapping for acceleration conditions in betatrons and synchrotrons contain a mathematical solution of this problem which takes into account the collective interaction of particles in the beam and the inductive properties of that beam at the moments of onset and break. A number of experimental investigations deals with measurements at shf and with electron accelerator and betatron components, while a special study is concerned with the linear cyclic accelerator ("elutron") proposed a few years ago by one of the coauthors of the article in question. No personalities are mentioned. References accompany most of the articles.

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RYAZIN, P. A.

Accelerators (Cont.)

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~~Card 4/5~~

LEONOV, Mikhail Yakovlevich; RUSINKO, Konstantin Nikolayevich;  
SHVAYKO, Nikolay Yur'yevich; GUROVICH, Viktor  
Tchalevich; RYAZIN, P.A., ed. red.

[Problems of strength and elasticity] Voprosy prochnosti i plastichnosti. Frunze, Izd-vo AN Kirg. SSR, 1964.  
81 p. (MIRA 17:8)

1. AN Kirgizskoy SSR, Frunze. Institut fiziki, matematiki i mekhaniki.



MALININ, Yu.S., kand.tekhn.nauk; RYAZIN, V.P., inzh.; VOLKOV, O.S., inzh.

Quantitative X-ray phase analysis of clinker. Trudy NITTSement  
no.17:3-12 '62. (MIRA 16:5)  
(X rays—Industrial applications) (Cement clinker—Analysis)

MALININ, Yu.S., kand.tekhn.nauk; KLISHANIS, N.D., inzh.; RYAZIN, V.P., inzh.

Study of the alite phase. Trudy NIITsement no.17:13-19 '62.  
(MIRA 16:5)

(Cement clinkers) (X rays--Industrial applications)

S/081/62/000/024/073/073  
B166/B186

AUTHORS: Malinin, Yu. S., Ryazin, V. P., Volkov, O. S.

TITLE: Quantitative determination of the mineralogical composition of clinker by X-ray diffractometry

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 24, 1962, 593, abstract 24K434 (Tsement, no. 3, 1962, 14 - 16)

TEXT: A JPC-50M (URS-50I) X-ray diffractometer with a focusing crystal monochromator was used for quantitative phase analysis of the clinkers of a number of cement plants.  $\text{CaF}_2$  was taken as the internal standard. Calibration curves were plotted from synthetic clinker minerals ground to pass a 0.063 mm sieve. These curves were used to study the clinkers from a number of cement plants and also several specimens of fused cement. The data obtained on  $\text{C}_3\text{S}$  and  $\text{C}_3\text{A}$  content in general agreed satisfactorily with the results of the petrographic determination of these minerals. The content of aluminoferrites and  $\text{C}_3\text{A}$  has to exceed 5% before they can be determined, and  $\text{C}_2\text{S}$  can only be determined if it is present in a quantity >15%.  
Card 1/2

Quantitative determination ...

S/081/62/000/024/073/073  
B166/B186

[Abstracter's note: Complete translation.]

Card 2/2

RYZONOVA, R.M.; DOLGOPOL'SKIY, I.M.; KLEBANSKIY, A.L.

Perfluorobutadiene in the diene synthesis reaction. Zhur.VKHO 6  
no.3:356-357 '61. (MIRA 14:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo  
kauchuka imeni S.V.Lebedeva.  
(Butadiene)

RYAZUROV, L.P.

USSR

Action of base and sulfides of monoethanolamine on salts of metals of analytical groups IV and V. L.P. RYAZUROV and L.V. CHURBANOVA. *Trudy Khimicheskoy Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 5(8), 109-11 (1951); cf. Hieber and Levy, *C.A.* 29, 118; Kuznetsov, *C.A.* 43, 557c. Monoethanolamine (I), its sulfide and polysulfide were studied with the idea of substituting them for the corresponding NH<sub>3</sub> compds. in parts of the qual. analysis scheme. A soln. of I is used for reactions. Ag salts react with I as with NH<sub>3</sub>. Mercurous compds. are reduced, HgSO<sub>4</sub> and Hg(NO<sub>3</sub>)<sub>2</sub> solns. do not form ppts. with I. Aq. and alc. solns. of HgCl<sub>2</sub> give a white amorphous ppt., slightly sol. in H<sub>2</sub>O, sol. in acids and excess I, assumed by analysis to be Hg(NHC<sub>2</sub>H<sub>4</sub>OHCl)<sub>2</sub>. With Pb(NO<sub>3</sub>)<sub>2</sub> or PbCl<sub>2</sub> soln. I gives white amorphous ppts., sol. in excess I, acids, and alkali, assumed by analysis to be Pb(OH)NO<sub>3</sub>, 3Pb(OH)<sub>2</sub>, and PbCl<sub>2</sub>·4Pb(OH)<sub>2</sub>·3PbO. Solns. of Bi chloride, nitrate, and sulfate give with I white voluminous ppts., slightly sol. in a large excess of I. The ppt. from the nitrate is assumed by analysis to be Bi(OH)<sub>3</sub>NO<sub>3</sub>·Bi<sub>2</sub>O<sub>3</sub>·H<sub>2</sub>O. With solns. of CuCl<sub>2</sub>, CuSO<sub>4</sub>, and Cu(NO<sub>3</sub>)<sub>2</sub> I gives blue-green ppts., sol. in acids and excess I, assumed (in the last 2 cases) by analysis to be 2CuSO<sub>4</sub>·3Cu(OH)<sub>2</sub> and Cu(OH)<sub>2</sub>·Cu(OH)NO<sub>3</sub>·H<sub>2</sub>S ppts. CuS from solns. contg. Cu ion and I. Cd<sup>++</sup>, Sn<sup>++</sup>, Sb<sup>++</sup>, and Sb<sup>++</sup> ppt. their hydroxides with I. Sn(OH)<sub>2</sub> and Sb(OH)<sub>3</sub> are insol. in excess I. I<sub>2</sub>S is prepd. by satg. a 10% I soln. with H<sub>2</sub>S and then adding an equal vol. of 10% I soln. I<sub>2</sub>S and I<sub>2</sub>S<sub>2</sub> have properties similar to (NH<sub>4</sub>)<sub>2</sub>S and (NH<sub>4</sub>)<sub>2</sub>S<sub>2</sub>. AgS, Bi<sub>2</sub>S<sub>3</sub>, CdS, and PbS are insol. in I, I<sub>2</sub>S, and I<sub>2</sub>S<sub>2</sub>. HgS and CuS are insol. in I and I<sub>2</sub>S but slightly sol. in I<sub>2</sub>S<sub>2</sub> at 60°. SnS is sol. in I<sub>2</sub>S<sub>2</sub>. SnS<sub>2</sub>, Sb<sub>2</sub>S<sub>3</sub>, and As<sub>2</sub>S<sub>3</sub> are sol. in I, I<sub>2</sub>S, and I<sub>2</sub>S<sub>2</sub>. From these solns. the sulfides can be pptd. again by acidifying with HCl. Rurilla Mayerle

KANNEGISER, N.N.; RYAZANTSEVA, T.N.

Survival of female *Anopheles maculipennis sacharovi* to an epidemiologically dangerous age [with summary in English]. Med.paraz. i paraz.bolezni. 23 no.1:21-25 Ja-F '59. (MIRA 12:3)

1. Iz Kazakhskoy respublikanskoy (glavnyy vrach S.I. Rybalko) i Kyzyl-Ordinskoy sanitarno-epidemiologicheskikh stantsiy.  
(MOSQUITOES,

*Anopheles maculipennis*, survival of females (Rus)

RYBA, Dusan, inz.

Calculation of an electromagnetic vibration exciter fed by  
alternating current through a rectifier. Stroj cas 16 no.3:  
261-269 '65.

1. Chair of Mechanics of the Faculty of Mechanical Engineering  
of the Czech Higher School of Technology, Prague. Submitted  
June 20, 1963.



RYBA, F.

"Tobacco industry in China. p. 563."

FRUMYSL POTRAVIN. Praha, Czechoslovakia. Vol. 6, no. 11. 1955.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 6, Jun 59 unclas

*RYBA, F.*

CZECHOSLOVAKIA/Chemical Technology - Chemical Products and  
Their Application - Food Industry.

H-28

Abs Jour : Ref Zhur - Khimiya, No 3, 1958, 9743

Author : Ryba F.

Inst : -

Title : Vacuum Moistening and Heat-Softening of Tobacco.

Orig Pub : Prumysl potravin, 1955, 6, No 2, 79-86

Abstract : Experiments on vacuum treatment of tobacco have shown  
that the mechanical properties of tobacco leaves depend  
not only on the moisture content in the chamber but also  
on the temperature and can be modified by a regulation  
of these factors.

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17

RYBA, F.

Vacuum damping and heat treatment of tobacco leaves. p.79

PRUMYSL POTRAVIN (Ministerstvo potravinarskeho prumyslu) Praha

Vol. 6, no.2, 1955

East European Accessions List

Vol. 5 No. 1

Jan. 1956

MICHNIEWSKA-LEONOWICZ, J.; RYBA, J.

A case of Heerfordt's syndrome. Klin. oczna 28 no.3:299-306 1958.

1. Z Oddziału Ocznego Ordynator: dr med. W. J. Orolowski i z Pododdziału  
Szczekowego Wojskowego Szpitala Okręgowego Kierownik: dr J. Ryba.  
Adres autora: Warszawa 22 ul. Zimorowicza 4 m 7.

(SARCOIDOSIS, case reports  
(Pol))

S/262/62/000/007/011/016  
1007/1027

AUTHOR: Ryba Josef

TITLE: Auxiliary device for carburetors

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk. 42. Silovyye ustanovki, no. 7, 1962, 75, abstract  
42.7.413. P. Czech. patent, class 46c<sup>2</sup>, 3, no. 97664, December 15, 1960

TEXT: A patent has been issued for a device for impoverishing the combustible mixture when the engine operates at reduced load and at very low pressure in the intake manifold. The diaphragm (3), designed to enrich the combustible mixture at a high load by shifting the adjusting head (10), is mounted in the chamber (2) connected through the channel (4) to the cavity (5) behind the carburetor throttle. The washer (8) in the centre of the diaphragm is fastened to the rod (6) carrying the head (10), which in turn is supported by the spring (9). Very low pressure [Abstractor's note: In the intake manifold] causes the diaphragm to bend thus increasing the clearance between the diaphragm and seat (1), and admitting additional air through the channel (13) and the adjusting head into the cavity (15) behind the diffuser. The additional air causes impoverishment of the combustible mixture. There is 1 figure.

Card 1/2

ORLOWSKI, Witold J.; ZAJFEN, Marian; WOJCIWICZ, Stanislaw; RYBA, Jozef

Role of the orbicularis oculi muscle in some atrophic diseases of the skin. Pol. tyg. lek. 19 no.14:499-503 30 Mr '64.

1. Z Oddzialu Chorob Oczu (ordynator: doc. dr. med. W.J. Orlovski) z Oddzialu Chorob Skory (ordynator: lek. med. M. Zajfen) i z Pododdzialu Chirurgii Szczekowej w Warszawie (kierownik: lek. stom. J. Ryba).

RYBA, M.

"Mass transfer process calculations" by H.Sawistowski, W.Smith.  
Reviewed by M.Ryba. Chem listy 58 no. 4:479-480 Ap '64.

Z/009/60/000/01/032/038  
E142/E235

AUTHOR: None Given

TITLE: New Books

PERIODICAL: Chemický průmysl, 1960, Nr 1, pp 38-40

ABSTRACT: The following books are reviewed:

"Examples of Chemical and Engineering Calculations I/1"  
by A. Pilař, M. Ryba, Z Volák, V. Pechoč and  
I. Koropecský; published by

SNTL, Prague, 1959; reviewed by J. Nývlt, VÚAnCh.

"Technical Uses of Silicones" by V. Bažant, V. Chvalovský  
and J. Rathouský; published by

SNTL, Prague, 1959; reviewed by J. Dvořák, Research

Institute for Macromolecular Chemistry.

"Chemical Analyses in the Polygraphic Industry" by

J. Borecký; published by

SNTL, Prague, 1959; reviewed by S. Lankaš.

"Survey of Organic Chemistry" ("Précis de Chimie  
Organique") by V. Grignard; published by

Masson a spol., Paris, 1958; reviewed by V. Veselý.

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Z/009/60/000/01/032/038  
E142/E235

New Books

"Macromolecular Substances" ("Hochpolymere - Herstellung, Eigenschaften und Anwendung als Kunststoffe") by K. Thinius; reviewed by V. Kameník, Research Institute for Macromolecular Chemistry. ✓

"Chemical Diary for 1960" published by SNTL, Prague, 1959

Card 2/2

VANISTA, J.; RYBA, M.

Jirgl's test in obstructive jaundice associated with infectious hepatitis in children. Cesk. pediat. 17 no.10: 908-910 0 '62.

1. Infekcni klinika nemocnice v Praze 8 - na Bulovce, prednosta prof. dr. J. Prochazka Infekcni klinika nemocnice v Praze 8 - na Bulovce, prednosta prof. dr. V. Kredba.

(JAUNDICE OBSTRUCTIVE)

(HEPATITIS EPIDEMIC)

(LIVER FUNCTION TESTS)

BRADACOVA, M.; KOTTOVA, A.; RYBA, M.; VIKLICKY, J.

Varicella congenita. Cesk. pediat. 20 no.9:793-797 S '65.

1. Infekční klinika (prednosta prof. dr. J. Prochazka) a  
patologicko-anatomicke oddeleni (vedouci doc. dr. J. Viklicky)  
nemocnice v Praze 8 na Bulovce.

RYBA, M., Praha 8, Sokolovska tr. 63

Marfan's syndrome (arachnodactyly). Cas lek. Cesk. 104 no.42:  
1149-1154 22 0 '65.

1. Infekční klinika v Praze 8 - Bulovka (prednosta prof. dr.  
J. Prochazka). Submitted November 1964.

RYBA, M.

Computing the pipe diameter of a given roughness at a given pressure drop and a given weight of discharge.

P. 257. (Chemicky Prumysl.) (Praha, Czechoslovakia) Vol. 7, No. 5, May 1957

SO: Monthly Index of East European Accession (EEAI) LC. Vol. 7, No. 5, May 1958

RYBA, O.

4

1834° Complexometric Titrations (Chelatometry). Kom-  
plexometrische Titration (Chelatometrie). VI. Pyro-  
catechol Violet, a New Specific Indicator. Brenzcatechinviolett,  
ein neuer spezifischer Indikator. pt. 2, Determination of  
Thorium. Die Bestimmung von Thorium. (German.) V. Sak-  
M. Malit, and O. Ryba, *Collection of Czechoslovak Chemical  
Communications*, 19, no. 4, Aug. 1954, p. 679-683.  
High selectivity in the presence of U or other cations. Tables.  
10 ref.

4-24

RYBA, O., AND OTHERS

"Chemical indicators. IV. Complex compounds of Pyrocatechol Violet with triand tetravalent metals."

p. 1462 (Chemické Listy, Vol. 51, no. 8, Aug. 1957, Praha, Czechoslovakia.)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No.6 June 1958

PIHA, O.; SUK, V.; KALAT, M.

Complexometric titrations(chelatometry). VI. Pyrocatechin violet, a new specific indicator. II. Determination of thorium. p. 609. (Collection of Czechoslovak Chemical Communication, Praha. Vol. 19, no. 4, Aug. 1954)  
SO: Monthly List of East  
European Accession (SEAL), LC, Vol. 4, No. 6,  
June 1955, Uncl.



RYBA, O., and others.

SCIENCE

Periodical COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS. SBORNIK CEEKOSLOVATSKIKH KHEMICHESKIKH RABOT. Vol. 23, no. 1, Jan. 1958.

RYBA, O., and others. Chemical indicators. IV. Complex compounds of Pyrocatechol Violet with tri- and tetravalent metals. In German. p. 71.

Monthly List of East European Accessions (EEAI) IC, Vol. 8, no. 3, March, 1959. Uncl.

RYBA, O.

16965\* (Complexometric Titrations (Chelatometry)) Kopa-  
plexometrische Titrationen (Chelatometrie). IV. (Pyro-  
catechin Violet As a New Specific Indicator; Determination of  
Bismuth.) Brenzcatechinviolett als neuer spezifischer In-  
dikator; Bestimmung des Wismuts. M. Malat, V. Suk, and  
O. Ryba. Collection of Czechoslovak Chemical Communica-  
tions, v. 10, no. 2, Apr. 1954, p. 258-262.  
Works in both acid and alkaline media. Determines Bi alone  
in high concentrations of Pb, and in other elements. Possibility  
of direct determination of Ti, Ni, Co, etc. Tables. 11 ref.

PETRANEK, J.; RYBA, O.

Microdetermination of halogens in liquid substances by means of the Schoniger method. Chem Cz Chem 29 no.11:2847-2850 N '64.

1. Institut für makromolekulare Chemie, Tschechoslowakische Akademie der Wissenschaften, Prag.

RYBA, O.

Complexometric titrations (chelometry). IV. Pyrocatechin violet as a few specific indicator; determination of bismuth. M. Halak, V. Suk, and O. Ryba (*Coll. Trav. chim. Tchecosl.*, 1954, 19, 258-262).—Pyrocatechin violet (sulphonphthalein) is suitable as a complexometric indicator in both acid and alkaline solution. Direct complexometric determination is thus permitted for cations which only form stable complexes with complexone in relatively acid solution. The determination of Bi in the presence of comparatively large amounts of Pb and other elements is described. Application to the determination of Th, Ni and Co by direct titration (cf. Part I, *ibid.*, 1953, 18, 783) is discussed. D. R. GLASSON.

E-1

CZECHOSLOVAKIA/Analytical Chemistry. General Questions.

Abs Jour: Ref Zhur-Khim., No 13, 1958, 42990.

Author : Ryba Olen, Cifka Jiri, Jezkova Dagmar, Malat Miroslav,  
~~Suk Václav~~

Inst :  
Title : Chemical Indicators. IV. Complexes of Pyrocatechol  
Violet with Trivalent and Tetravalent Metals.

Orig Pub: Chem. listy, 1957, 51, No 8, 1462-1466; Collect. czechosl.  
Chem. Commun., 1958, 23, No 1, 71-77.

Abstract: The spectrophotometric method was used to study the formation, composition and stability of the blue-colored complexes of Pyrocatechol Violet (H<sub>4</sub>PV) with Bi<sup>3+</sup>, Zr<sup>(4+)</sup>, Sn<sup>(4+)</sup>, Th<sup>4+</sup>, Ga<sup>3+</sup>, Al<sup>3+</sup> and In<sup>3+</sup>, which are formed even in an acid medium. For all the elements, with the exception of Sn and Ti, the corresponding

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CZECHOSLOVAKIA/Analytical Chemistry. General Questions.

E-1

Abs Jour: Ref Zhur-Khim., No 13, 1958, 42990.

most instances a sharp maximum at 610-620 m $\mu$ . From values of extinction at a definite wave length and constant pH, depending upon the ratio of interacting component parts, it follows that 3- and 4-valent metals, analogously to the 2-valent, form with H<sub>4</sub>PV mono- and bi-metallic complexes. Trend of extinction curves in the case of Bi evidences the existence of a 3-metallic complex at pH above 3, which is due to formation of BiO<sup>3+</sup>. The same results were obtained by the method of continuous measurements. This method confirms the existence of mono- and bi-metallic complexes of H<sub>4</sub>PV with Bi, Ca, Al and In, and shows that H<sub>4</sub>PV also forms complexes in which the ratio H<sub>4</sub>PV:metal = 2:1 (for example, with

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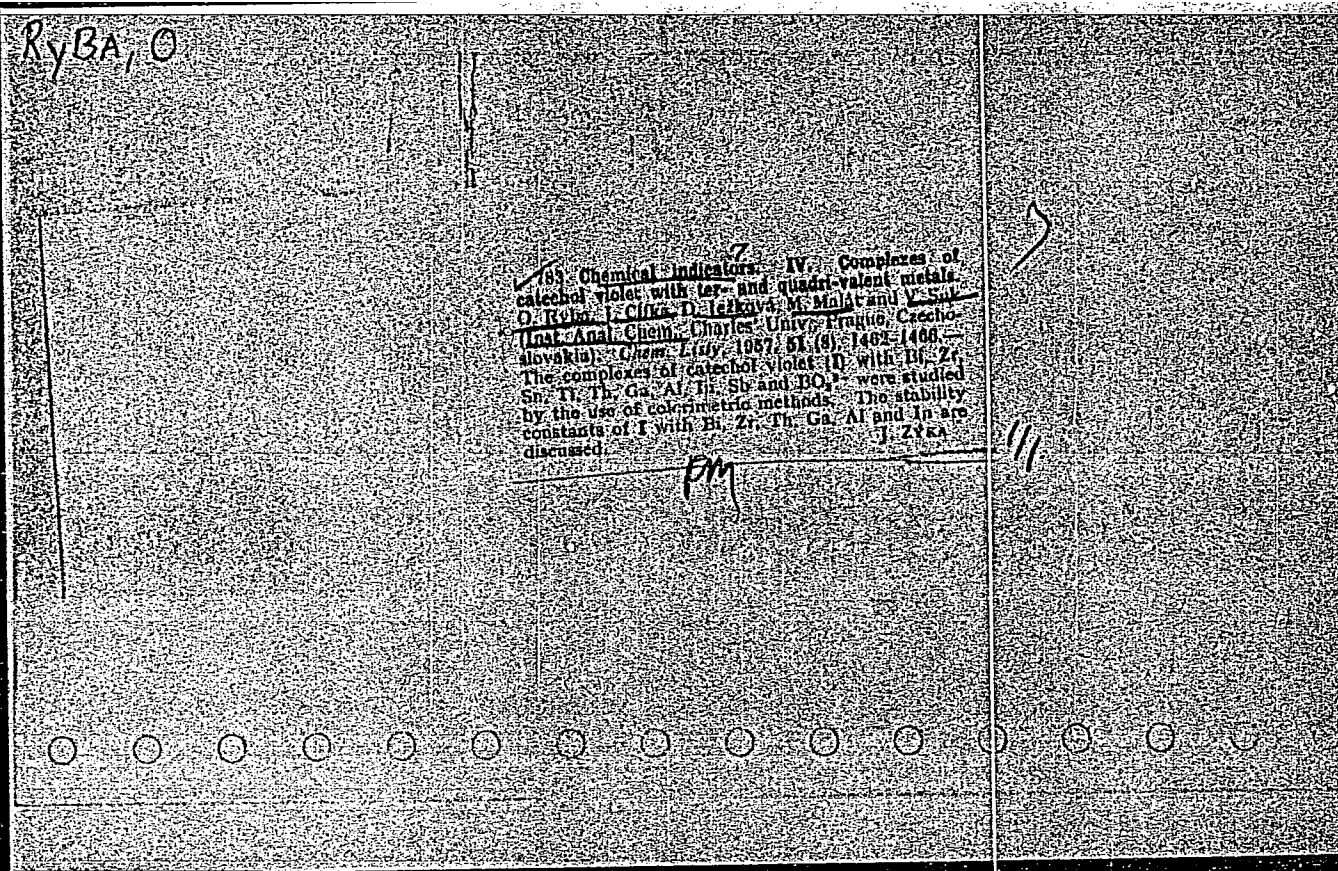
CZECHOSLOVAKIA/Analytical Chemistry. General Questions.

E-1

Abs Jour: Ref Zhur-Khim., No 13, 1958, 42990.

and antimony (II)  $H_4PV$  forms, in neutral or weakly alkaline medium, pink complexes the extinction maximum of which, in the presence of an excess of I or II, is at 500 or 485  $m\mu$ . Curves showing the dependence of the extinction of the complexes of I on wave length, at different concentrations of I in buffered solutions of  $NH_4OH$ , intersect at a single point, in contrast with complexes of  $H_4PV$  with cations of metals. The reaction of  $H_4PV$  with I is of low sensitivity; with II it occurs slowly. Arsenites do not interact with  $H_4PV$ . Communication III see RZhKhim, 1957, 27098.

Card : 5/5





*Ryba, O.*

98. Complexometric titrations (chelometry). IV. Catechol violet as a new specific indicator: determination of bismuth. M. Malát, V. Suk and O. Ryba (Chem. Listy, 1954, 48 (2), 203-206).

~~Assimila~~ highly selective method for the complexometric determination of Bi is based on the use of catechol violet (catecholsulphonaphthalein) (I) as indicator in media of pH 2 to 4. To the soln. containing Bi, acidified with  $\text{HNO}_3$ , add a few drops of a 0.1 per cent. aq. soln. of I; a clear blue colour should develop. A violet coloration is a sign of too great acidity; the colour should be adjusted to the required blue shade by adding aq.  $\text{NH}_3$ . Titrate with a standard soln. of complexone III of suitable concn. (e.g., 0.002 M); at the end-point the colour changes to yellow after a transient violet. Pb, Cd, Cu, Ag, Al, Zn, Co, Ni, Mn, Ca and Mg may be present without interfering. G. GLASSER

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Ryba, O.

63. Complexometric titrations (chelometry).  
VI. Catechol violet, a new specific indicator.  
VII. Determination of thorium. V. Suk, M. Malat  
and O. Ryba (Coll. Czech. Chem. Comm., 1954, 19  
[4], 429-433). Direct complexometric determina-  
tion of Th in acid media ( $\approx$  pH 3) with catechol  
violet (catecholsulphonphthalein) as indicator is  
described. The selectivity of the determination is  
good; Th can be determined in the presence of U  
and a large number of other cations, e.g., Pb, Ni,  
Nd, Pr, Ce and La. (This is a translation into  
German of a paper that appeared in Chem. Listy,  
1954, 48, 633.)  
D. R. GLASSON

MA 254

RYBA, O.; PETRANEK, J.; POSPISIL, J.

Antioxidation agents and stabilizers. Pt.4. Coll Cz Chem 30  
no.3:843-852 Mr '65.

1. Institute of Macromolecular Chemistry of the Czechoslovak  
Academy of Sciences, Prague. Submitted February 14, 1964.

Ryba, O.

1433. Chemical indicators. III. The complexes formed by catechol violet with bivalent metals. J. Cifka, O. Ryba, V. Snek and M. Malát (Inst. Anal. Chem., Charles Univ., Prague, Czechoslovakia). Chem. Listy, 1966, 60 (8), 888-898. Stoichiometric relations and the structure of complexes of catechol violet with Cu, Pb, Zn, Ni, Co, Cd, Mn and Mg were studied by using colorimetric and potentiometric methods, and the corresponding constants of complexity are given. It has been found that catechol violet forms two sorts of complexes with bivalent metals—monometallic (blue-violet) and bimetallic (blue). The stability of these complexes increases in the order—Mg<sup>2+</sup>, Mn<sup>2+</sup>, Cd<sup>2+</sup>, Co<sup>2+</sup>, Ni<sup>2+</sup>, Zn<sup>2+</sup>, Pb<sup>2+</sup> and Cu<sup>2+</sup>. The constants of bimetallic complexes are smaller than those of monometallic but the formation of bimetallic complexes is accompanied by a more distinct change in the colour of the indicator. The graphical and mathematical evaluation of the results is described.

J. ZYKA

PM

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RYBA OLEN

Chemical indicators. IV. Complexes of Pyrocatechol Violet with tri- and quadrivalent metals. Olga Ryba, Jitka Ciska, Dagmar Jezkova, Miloslav Mada, and Václav Sule (Charles Univ., Prague). Chem. listy 51, 1402-6 (1957); cf. C.A. 51, 11102a. Colorimetric studies revealed that with rising pH values Pyrocatechol Violet (I) gradually forms blue complexes with Bi, Zn, Sn, Pb, Ga, Al, and In ions, the stability of which decreases in the given order. The tri- and quadrivalent metals give mono- and bimetallic complexes with I. Their existence was proved by the method of continual variations. I gives pink complexes with  $\text{BO}_2^-$  and  $\text{ShO}_4^-$  in neutral or weakly alk. solns. The complexity consts. (pK) of I for the mono- and bimetallic complexes are Bi  $^{+++}$  27.07, 5.25; Zn  $^{++}$  27.40, 4.19; Pb  $^{++}$  21.36, 4.42; Ga  $^{+++}$  22.18, 4.65; Al  $^{+++}$  10.13, 4.06; In  $^{+++}$  18.10, 4.81, resp. L. J. Urbanek.

DM  
mt

RYBA, OLEN

CZECHOSLOVAKIA/ Analytical Chemistry. General Problems. G-1

Abs Jour: Referat. Zhur.-Khimiya, No. 8, 1957, 27098.

Author : Jiri Cifka, Olen Ryba, Vaclav Suk, Miroslav Malat.

Title : Chemical Indicators. III. Complexes of Pyrocatechin Violet with Bivalent Metals.

Orig Pub: Chem. listy, 1956, 50, No. 6, 888 - 898; Sb. chekhosl. khim. rabot, 1956, 21, No. 6, 1418 - 1429.

Abstract: The stability, composition and structure of bluish-violet or bluish-green complexes of pyrocatechin violet ( $H_4A$ ) with  $Cu^{2+}$ ,  $Pb^{2+}$ ,  $Zn^{2+}$ ,  $Ni^{2+}$ ,  $Co^{2+}$ ,  $Cd^{2+}$ ,  $Mn^{2+}$  and  $Mg^{2+}$  produced in alkaline medium were investigated by the photometric and potentiometric methods. It was established by the method of incessant modification that in an ammonium buffer solution, also complexes of the

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CZECHOSLOVAKIA/ Analytical Chemistry. General Problems. G-1

Abs Jour: Referat. Zhur.-Khimiya, No. 8, 1957, 27098.

composition  $M^{2+} : H_4A = 2 : 1$  ( $\lambda_{max.} = 625$  to  $660 m\mu$ ) were gradually produced at the concentration rise of  $M^{2+}$  beside complexes of the composition  $M^{2+} : H_4A = 1 : 1$  ( $\lambda_{max.} = 600 m\mu$ ). It was shown by potentiometric titration with 0.05 M solution of NaOH in  $N_2$  atmosphere that the formation of monometallic complexes proceeds according to the scheme:  $H_3A^- + M^{2+} = MHA^- + 2H^+$ ;  $MHA^- + MA^{2-} + H^+$ . The ions  $MHA^-$  interact with  $M^{2+}$  at high concentrations of the latter producing the bimetallic complex  $M_2A$ ; this complex separates as a colored precipitate in absence of  $NH_4OH$ . The addition of  $OH^-$  to  $M_2A$  (blue) with the formation of  $M_2AOH^-$  (bluish-violet) takes place in strongly alkaline solutions; a similar conversion takes place also in case of monometallic complexes:  $MA^{2-} + OH^- \rightarrow MAOH^-$ . The constants of instability

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CZECHOSLOVAKIA/ Analytical Chemistry. General Problems. G-1

Abs Jour: Referat. Zhur.-Khimiya, No. 8, 1957, 27098.

of monometallic complexes were computed from potentiometric and photometric data taking into consideration that ammoniates  $M(NH_3)_{n-2}HA^-$  or  $M(NH_3)_{n-2}A^{2-}$ , where  $n = 6$  or  $4$ , are forming in the  $NH_4OH$  medium. The instability constants of bimetallic complexes were also computed basing on colorimetric data. The stability of metal complexes rises in the series  $Mg < Mn < Cd < Co < Ni < Zn < Pb < Cu$ . The stability of bimetallic complexes is lower than that of monometallic; but the coloration transition is more distinct at the formation of bimetallic complexes. See RzhKhim, 1956, 75225 for report II.

Card 3/3



RYBA, OLEN

Chemical indicators. III. Complexes formed by Pyrocatechol Violet with bivalent metals. Jit Cifka, Olen Ryba, Vaclav Sak, and Miroslav Malát (Charles Univ., Prague). Chem. Listy 50, 889-92 (1956); cf. C.A.B. 50, 3147c. Pyrocatechol Violet (I) forms with bivalent cations 2 kinds of complexes: the blue-violet monometallic (II) and the blue-bimetallic (III) ones. The stability of both II and III increases in the order  $Mg^{++}$ ,  $Mn^{++}$ ,  $Cu^{++}$ ,  $Co^{++}$ ,  $Ni^{++}$ ,  $Zn^{++}$ ,  $Pb^{++}$ , and  $Cd^{++}$ . I does not yield colored complexes with univalent cations, with ions of the Pt-group metals, alk. metals, and alk. earths, and with  $As^{+++}$ ,  $Ag^{+}$ ,  $Tl^{+}$ , and  $NH_4^{+}$ . Complexity consts. of III detd. by extensive colorimetric and potentiometric studies are lower than those of II, however, formation of III is connected with a more conspicuous color change of the indicator. Stoichiometric, structural, and math. backgrounds are discussed.

L. J. Urbánek

PM

SYM. O.; SOK, V.; KALAT, K.

"Complexometric Titrations (Chelatometry). VI. Pyrocatechol Purple as a New Specific Indicator; Determination of Thorium", P. 533, (CHEMICKÉ LISTY, Vol. 48, No. 4, April 1954, Praha, Czech.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 3, Mar 1955, Uncl.

RYBA, O.; MALAT, M.; SUK, V.

"Complexometric Titrations (Chelatometry). IV. Pyrocatechin Purple as a New Specific Indicator; Determination of Bismuth", P. 203, (CHEMICKE LISTY, Vol. 48, No. 2, Feb. 1954, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

RYMA, O.; MALAT, M.; SUK, V.

"Complexometric Titration (Chelatometry). IV. Pyrocatechin Violet as a New Specific Indicator; Determination of Bismuth." p. 258. (COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS. SBORNIK CHEKHOSLOVATSKIKH KHEMICHESKIKH RABOT. Vol. 19, No. 2, Apr. 1954; Praha, Czech.)

So: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 4, April 1955, Uncl..

RYBA, O.

CZECH

Complexometric titrations (chelatorimetry). IV. Pyrocatechol Violet as a new specific indicator; determination of bismuth. Miroslav Mědí, Václav Suk, and Olen Ryba (Charles Univ., Prague). Collection Czechoslov. Chem. Commun. 19, 258-62 (1954) (in German).—See C.A. 48, 6309g. E. I. C.

RYBA, O.

MALAT, M.; SUK, V.; RYBA, O.

Complexometric titration (chelatology). Part 4. Pyrocatechin violet as a new specific indicator; determination of bismuth [in German with summary in Russian]. Sbor. Chekh. khim. rab. 19 no. 2: 258-262 Apr '54.  
(MLRA 7:6)

1. Institut analyticheskoy khimii Karlovskogo universiteta, Praga.  
(Pyrocatechol) (Bismuth)

RYBA, OLEN

(4)

Complexometric titrations (chelatology). IV. Pyrocatechol Violet as a new specific indicator; determination of bismuth. Miroslav Malát, Václav Suk, and Olen Ryba (Karlova Univ., Prague, Czech.). Chem. Listy 48: 203-8 (1954); cf. C.A. 48, 5715c. Pyrocatechol Violet (pyrocatecholsulfophthalein) (I) is used as an indicator for complexometric titrations of Bi. A soln. contg. Bi is acidified with  $\text{HNO}_3$ . After the addn. of a few drops of I, a blue color should develop. If the shade is violet, add  $\text{NH}_3$  to develop the clear-blue color. Titrate the soln. with 0.002M complexon (III) until a yellow color (after a transient violet color) is reached. Bi can be detd. in the presence of Cd, Cu, Ag, Al, Zn, Co, Ni, Mn, Ca, and Mg. Successful direct titration for the detn. of Th, Co, and Ni is expected.

M. Hudlický

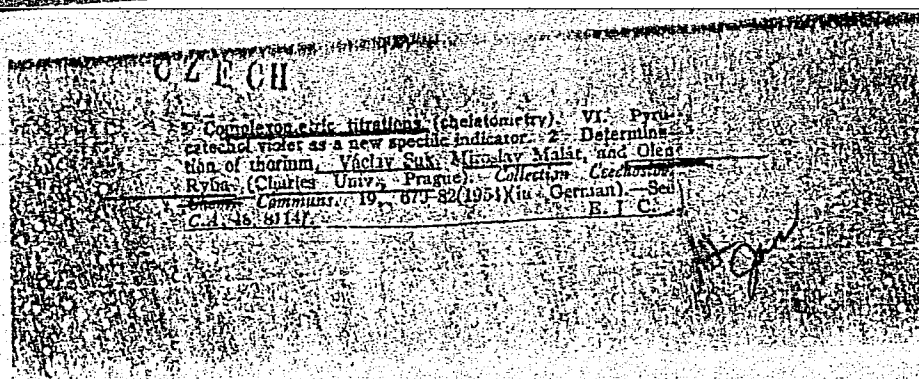
(4) 9  
Complexometric titrations (chelatorimetry). VI. Pyrocatechol violet as a new specific indicator. Determination of thorium. Václav Suk, Miroslav Malát, and Olen Ryba (Karlova Univ., Prague, Czech.). *Chem. Listy* 48, 103-104 (1954); cf. *C.A.* 48, 7483b. —A red complex of Th with pyrocatechol violet (I) is decolorized at pH 3 by titration with complexon. The selectivity of the method permits the detn. of Th in the presence of Pb, Cu, Al, Co, Ni, Mn, Zn, La, Ce, Pr, Nd, Ca, Mg, and  $\text{NH}_4^+$  ions and even in the presence of a 500-fold excess of  $\text{UO}_2^{++}$ . The sample contg. up to 100 mg. Th in 100 ml. is set to pH 2.5-3.5 with  $\text{HNO}_3$  or  $\text{NH}_3$ , 2-3 drops of I soln. (contg. 0.1 I in 100 ml.  $\text{H}_2\text{O}$ ) is added, and the soln. titrated with 0.002-0.1M complexon until the red color changes to lemon-yellow.

M. Hudlický

16-13-54



RYBA, OLEN



RYBA, Z.

Gaskets for heating half-coupling. Przegł kolej mechan 15  
no.2:3 of cover F '63.

COUNTRY : CZECHOSLOVAKIA  
 CATEGORY : Chemical Technology. Chemical Products and Their  
 Applications. Pharmaceuticals. Vitamins. Antibiotics  
 ABS. JOUR. : RZhKhim., No 19, 1959, No. 62217  
 AUTHOR : Bel'dorik, G.; Evtachev, R.; Saitceev, R.  
 INSTITUTE : -  
 TITLE : -  
 ORIG. PUB. : Vestnik. Farmac., 1958, 7, No 7, 415-417  
 ABSTRACT : A project involving additions to the Czechoslova-  
 kian Pharmacopoea, 2d Issue based on experimental  
 work done by the authors (See Ref. Zhur., Khim.,  
 1958, No 12, 32908). Detailed description of ana-  
 lysis and procedure for the determination of the  
 freezing point lowering of solutions. --T. Zvarova.

Cards:

1/1

| 1ST AND 2ND ORDERS                              |  | PROCESSED AND PROPERTIES INDEX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | 3RD AND 4TH ORDERS |  |
|-------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------|--|
| BC                                              |  | Effect of sodium perborate on glycerol. 1. Ryabinina (Cecilia Gerasimov. Lkh., 1933, 13, 41-45; Chem. Zentr., 1933, i, 3361).—The detection of $\text{CH}_2\text{O}$ in presence of $\text{H}_2\text{O}_2$ and perborate with guanacolsulphonic acid (I) and other reagents has been studied in relation to the detection of glycerol (II) in prep. containing (II) and perborate. After removal of $\text{H}_2\text{O}_2$ by filtration through $\text{MnO}_2$ , $\text{CH}_2\text{O}$ can be detected with (I); a 4% but not a 0.4% solution of $\text{CH}_2\text{O}$ in presence of perborate gives a characteristic reaction. Hehner's reagent detects $\text{CH}_2\text{O}$ in < 0.4% concn. in presence of perborate. The reaction with morphine is similarly affected. Lebbin's reaction is normal at < 0.4%. To avoid the formation of $\text{CH}_2\text{O}$ , the mixture must be prepared in the cold; the stability can be increased by addition of phenacetin. |  | B-II-2             |  |
| ASB-11A METALLURGICAL LITERATURE CLASSIFICATION |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |                    |  |
| FROM SYNDICATE                                  |  | FROM BOMBY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | FROM BOMBY         |  |
| 100000 111 000 000                              |  | 100000 111 000 000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | 100000 111 000 000 |  |

RYBACEK, K., inz.

"Heat transfer" by B. Gebhart. Reviewed by K. Rybacek.  
Strojirenstvi 12 no.4:319 Ap '62.

|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |       |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| COUNTRY:   | : Czechoslovakia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | H-17  |
| CATEGORY   | :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |       |
| ABS. JOUR. | : RZKhim., No. 51960, No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 19051 |
| AUTHOR     | : Rektorik, Z., Rybacek, L., Synek, J., and Zajicek, R.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |
| INST.      | : Not given                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |
| TITLE      | : Eye Drops Containing Zinc Sulfate Prepared According to PhBs II, Their Composition, and Preparation Methods.                                                                                                                                                                                                                                                                                                                                                                                                                              |       |
| ORIG. PUB. | : Ceskoslov Farmac, 7, No 9, 508-511 (1958)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |
| ABSTRACT   | : The composition and preparation method for the above-indicated medicinal preparation have been checked from the point of view of possible incompatibility of phenylmercuriborate with NaCl, and the effect of various synthesis aids and of the temperature of the solvent on the hydrolysis of ZnSO <sub>4</sub> . It is proposed to dissolve ZnSO <sub>4</sub> (0.25%) and the synthesis aids (0.5% CH <sub>3</sub> COONa and 0.6% NaCl) in a solution of phenylmercuriborate (0.002%) at about 20°. The above procedure eliminates the |       |
| CARD:      | 1/2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |

RYBACEK, L.; ZALIEK, R.

Plan for the article on collyria PhBs III. Cesk. farm. 13 no.7:  
385-388 S '64.

RYBACEK, L. ZAJICEK, R.

Method for estimating the required number of workers in  
pharmacies by means of the working equivalent. Cesk. farm.  
I2 no.10:497-501 D\*63.

1. Rozvojové lekarnické středisko, Praha.

\*





CZECHOSLOVAKIA / Physical Chemistry. Thermodynamics. Thermo- B-8  
chemistry. Equilibria. Physicochemical Analysis.  
Phase Transitions.

Abs Jour : Ref Zhur - Khimiya, No 3, 1959, No. 7518

Author : Rektorik, Z.; Rybacek, L.; Zajicek, R.

Inst : Not given

Title : Cryoscopic Data of the Solutions of Boric Acid and  
Monosubstituted Sodium Phosphate

Orig Pub : Ceskosl. farmac., 1958, 7, No 6, 318-320

Abstract : Determinations were made by means of a deltameter (RZhKhim,  
1958, 68445) of cryoscopic data of solutions of  $H_3BO_3$  (I)  
and  $Na_2HPO_4 \cdot 2H_2O$  (II) which differ from those found in the  
literature. According to results of the experiments the  
isotonic ( $\Delta = 0.520^\circ$ ) solutions are those containing 1.69%  
I and 2.38% II. -- According to authors' summary

Card 1/1

NAVRATIL, K.;RYBACEK, L.

Addendum to the Czechoslovak Pharmacopeia. Cesk. farm. 2 no.2:61-66  
Feb 1953. (GLML 24:4)

*RYBACEK, L*

FILIP, A.; RYBACEK, L.

~~Examinations for certified pharmacists. Cas. cesk lek. 63 no.20:~~  
278-283 31 Oct 50. (CLML 20:4)

ZAJICEK, R.; KUNOVSKY, L.; RYBACEK, L.; SOLICH, J.

Orientation formula for estimating the number of workers  
required for hospital pharmacies. Cesk. farm. 12 no.10:501-508  
D'63.

1. Rozvojove lekarnicke stredisko, Praha, a Farmaceuticka  
fakulta UK, Bratislava.

\*

RYBACEK, L.

SURNAME, Given Names

Country: Czechoslovakia

Academic Degrees: [not given]

Affiliation:

Source: Bratislava, Farmaceuticky Obzor, Vol XXX, No 7, 1961, pp 196-224.

Data: "Categories in the Pharmaceutical Service."

Authors: KUNOVSKY, L., Faculty of Pharmacy, Comenius University (Farmaceuticka fakulta, Universita Komenskeho), Bratislava.

RYBACEK, L., presumably Faculty of Pharmacy, Comenius University, Bratislava.

SOLICH, J., presumably Kraj Institute of Public Health (Krajsky ustav narodniho zdravi), Ceske Budejovice.

STANEK, J., presumably Kraj Institute of Public Health, Ceske Budejovice.

ZAJICEK, R., presumably Center of Pharmaceutical Development (Rozvojove lekar-  
nicke stredisko) Prague.

GPO 981643

17

Determination of the power of adsorption of tablets of medicinal charcoal. V. LANG AND L. RYBAČEK. *Casopis Českoslov. Lékárenictva* 12, 165-8(1932).--Of 3 com. samples of medicinal charcoal tested for power of adsorption of methylene blue and HgCl<sub>2</sub> only one was active.

WILLIAM J. HURA

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

| 1ST AND 2ND CROSBY                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1ST AND 2ND CROSBY |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 1ST AND 2ND CROSBY                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1ST AND 2ND CROSBY |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p>14</p> <p>Effect of sodium perborate on glycerol. LUDVIG RYMAČEK. <i>Časopis Československé chemické společnosti</i> 13, 41-6 (1933); cf. C. A. 28, 5143; <del>soln. of NaBO<sub>3</sub></del> in glycerol must be made in the cold to avoid formation of HCHO; stability of the soln. is increased by neg. catalysts such as phenacetin. The effect of H<sub>2</sub>O<sub>2</sub> and of NaBO<sub>3</sub> on the sensitivity of reactions of HCHO was studied. WILLIAM J. HUSA</p> <p>17</p> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p>ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p>1ST AND 2ND CROSBY</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



PUBLIC HEALTH

CZECHOSLOVAKIA

ZAJICEK, B.; RYBACEK, L.; KUNOVSKY, L.; Pharmaceutical Development Center (Rozvojove Lekarnicko Stredisko), Prague.

"Preliminary Determination of Requirements of Specialized Stations in Pharmacies."

Prague, Ceskoslovenska Farmacie, Vol 15, No 4, May 66, pp 180-192

Abstract [Authors' English summary modified]: The authors discuss the necessity to provide personnel and apparatus to perform certain specialized duties in certain locations, within the premise of a pharmacy. In the case of eyedrops, details of the number of prescriptions handled and the number of hours required to handle these and the necessity to provide specific facilities for this purpose are discussed. An average of 520 daily prescriptions should be handled at such a station. Similar details for the location of such facilities at hospitals are reviewed. 7 Tables, 7 Czech references. (Manuscript received 20 Aug 65).

1/1

ZAJICEK, R.; RYBACEK, L.; SOLICH, J.

Estimated personnel for pharmaceutical services in general  
practice, sanatoria and spas. Cesk. farm. 14 no.3:120-127  
Mr'65.

RYBACEK, L.

Plan for the article on ear drops PhHs I(1). Cesk. farm. 13 no.7:  
389-390 S '64.

1. Rozvojeve lekarnicke stredisko, Praha.

LOIEZAI, J.; LUKSYTE, E.; RYBACEK, V.; ZYKA, J.

Reductometric titration with iron (II) sulphate in triethanol-  
amine medium. Chem Cz Chem 29 no.11:2597-2606 N '64.

1. Institut für analytische Chemie, Karlsuniversität, Prague.
2. Present address: Chemische Fakultät, Universität, Vilnius,  
Lithuania (for Luksyte).

RYBACEY, V.

"Some problems concerning the individual development of hops."

VESTNIK. Praha, Czechoslovakia, Vol. 5, No. 7/8, 1958.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 9, September 1959.

Unclassified.

Rybacek, V.

AGRICULTURE

8th Congress of the European Committee on Hop Growing. p. 551

Vol. 5, no. 10, 1958

Monthly Index of East European Accessions (EEAI) LC, Vol. 8, No. 4, April 1959

RYBACEK, V.

"Development of Our Agriculture in 1954." (ZA SOCIALISTICKE ZEMEDELSTVI, Vol. 4, no. 1, Jan. 1954, Praha, Czechoslovakia)

So: Monthly List of East European Accessions, IC, Vol. 3, No. 5, May 1954/Unclassified

RYBACEK, V.

Significance of the National Conference of Scientific Workers in the development of agriculture and forestry.

p. 229

Vol. 3, no. 5, 1956

BESEDA VENKOVSKÉ ZODINY

Praha

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 5, no. 12  
December 1956



RYBACEK, V.

Report on the activities of the Czechoslovak Academy of Agriculture during the years 1953-1955. p. 429.

Discussion of the reports of A. Klecka and V. Rybacek at the 10th General Assembly of the Czechoslovak Academy of Agriculture. p. 446.

Congress of the delegates of the district hunting clubs of the Czechoslovak Hunting Association. p. 479.

New members and corresponding members of the Czechoslovak Academy of Agriculture. p. 487.

VESTNIK. Vol. 3, no. 8/9, 1956

Praha, Czechoslovakia

SOURCE: East European List (EEAL) Library of  
Congress, Vol. 6, No. 1, January 1957

RYBACHOV, I.M.

Low-temperature dehydration of petroleum. Neft. khoz. 42 no.12:  
35-39 D 164 (MIRA 18:2)

RYBACHOK, I.N.; SHUL'GA, P.M.

Selecting an efficient saddle for petroleum. Khim. i tekhn.  
topl. i tekh. 9 no. 4:39-45 Ap '64. (MIRA 17:8)

1. Volgogradskiy nauchno-issledovatel'skiy institut neftyanoy i  
gazovoy promyshlennosti.

RYBACHEK, A.A.

Competition-review at the Kanonerskii plant. Biul. tekhn.-ekon.-  
inform. Tekhn. upr. Min. mor. flota 7 no.5:85-87 '62. (MIRA 16:3)

1. Nachal'nik byuro tekhnicheskoy informatsii Kanonerskogo zavoda.  
(Shipyards--Technological innovations)